

**INSTALLATION OF VERSION 10.1 SOFTWARE FOR
THE RADAR PRODUCT GENERATION GROUP AND
THE RADAR DATA ACQUISITION GROUP**

**DOPPLER METEOROLOGICAL RADAR
WSR-88D**



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PUBLISHED UNDER AUTHORITY OF THE SECRETARIES OF
COMMERCE, THE AIR FORCE, AND TRANSPORTATION

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FAA APPROVAL:

//SIGNED//

_____ **Date** _____

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Program Director for Operational Support

1. SUBJECT

Installation of Version 10.1 Software for the Radar Product Generation (RPG) and the Radar Data Acquisition (RDA).

2. PURPOSE

The purpose of this routine document is to provide installation instructions for the RPG and RDA Software Version 10.1 upgrade. It is issued as a result of Operational Support Facility (OSF) Engineering Change Proposal (ECP) F0095R1.

This revision affects all FAA RPG's and RDA's. Map changes are not required.

Collocated RPG/RDA and Non-Collocated RPG sites require two technicians to perform the installation, one at the Unit Control Position (UCP) and the other at the RDA.

This software upgrade has been reviewed and evaluated for impact upon Year 2000 (Y2K) functionality and has no detrimental effect upon Y2K compliance issues.

For additional information concerning this software upgrade, contact the Operational Support Facility, Hotline, Norman, Oklahoma; phone number: (800) 643-3363. An electronic copy of this document can be found at the following Internet address:
www.osf.noaa.gov/ssb/sysdoc/techman/tmlinks.htm

3. SITES AFFECTED

This software upgrade applies to all FAA RPG and RDA sites.

4. ESTIMATED COMPLETION DATE

The target completion date is 60 days after receipt of this document and kit.

5. EQUIPMENT AFFECTED

Radar Product Generation (RPG) Group.
Radar Data Acquisition (RDA) Group.

6. SOFTWARE AFFECTED

RDA, CPCI-01; RPG, and CPCI-03.

7. MODIFICATION ACCOMPLISHED BY

Site electronic systems analysts and/or electronic technicians will accomplish this modification. Two technicians/staff personnel may be required to perform these procedures.

8. MATERIAL REQUIRED

Installation instructions for the RPG, RDA; sufficient blank tapes to make the required backups (number required are explained in [ATTACHMENT 1](#), step 5.) and one system installation kit containing the following:

NOTE

FAA Redundant sites will receive 2 sets of SCSI tapes for the RPG and RDA; one set for Ch1 and one set for Ch2.

Nomenclature	Qty
Software Configuration Matrix	1 each
SCSI tape containing RDA application files	1 each
SCSI tape containing RPG application files	1 each

9. SOURCE OF MATERIALS

The items in paragraph 8 will be direct shipped to each site by the National Weather Service (NWS) OSF.

10. SPECIAL TOOLS AND TEST EQUIPMENT REQUIRED (SOFTWARE)

Not applicable.

11. TIME AND PERSONNEL REQUIRED

5 staff-hours for Redundant RPG installation.
4 staff-hours for Redundant RDA installation.

12. DOCUMENTS AFFECTED

Not applicable.

13. VERIFICATION STATEMENT

This modification was successfully installed at the OSF.

14. DISPOSITION OF SOFTWARE SCSI TAPES

Not applicable.

15. IMPLEMENTATION PROCEDURES

Perform the procedures in ATTACHMENTS 1 through 4.

FAA: Coordinate the shutdown with the appropriate air traffic control personnel.

16. FAA DISTRIBUTION

This directive is distributed to selected offices and services within Washington headquarters, the William J. Hughes Technical Center, the Mike Monroney Aeronautical Center, regional Airway Facilities divisions, and Airway Facilities field offices having the following facilities/equipment: NXRAD.

17. CHANGES TO TABLE OF CONTENTS (FAA)

This chapter will be included in the next revision to the table of contents for FAA Order 6345.1, Electronic Equipment Modification Handbook - Next Generation Weather Radar (NEXRAD).

18. RECOMMENDATIONS FOR CHANGES (FAA)

Forward any recommendations for changes to this directive through normal channels to the National Airway Systems Engineering Division, AOS-200, Operational Support.

19. REPORTING INSTRUCTIONS

FAA (Changes to Recorded Data)

The National Airway System Engineering Division, AOS-200, is responsible for authorizing individual software upgrades to the FAA regions and FAA NEXRAD facilities. This will be accomplished as modifications occur. Any additional questions concerning this matter should be directed to Dennis Roofe, Weather Products Branch, AOS-250, (405) 366-6590, ext. 3247, or Bettie Loudenslager, AOS-250, (405) 954-5186.

Enter this document number, date, and chapter number on the appropriate FAA Form 6032-1, Airway Facilities Modification Report.

FAA: EEM Modification Handbook 6345.1 CHG 11, Chap 12

Complete [ATTACHMENT 4](#) and fax, mail, or e-mail information to:

- (1) Mail Address: System Support Branch, Configuration Management Section
 Operational Support Facility
 3200 Marshall Ave, Suite 101
 Norman, Oklahoma 73072-8028

- (2) Fax Number: (405) 366-6553
 ATTN: Configuration Management Section

- (3) E-mail Address: chunt@osf.noaa.gov

ATTACHMENT 1

ORGANIZING YOUR BUILD 10.1 TAPES

1. Description of Contents

- a. This package contains the procedures for installing Build 10.1 software on the WSR-88D. These procedures are to be performed on all FAA RPG's and RDA's in numerical order of these attachments.
- b. ATTACHMENT 1, Organizing the Build 10.1 Tapes, identifies the procedures to organize the tapes comprising Build 10.1.
- c. [ATTACHMENT 2](#), Procedures for Loading Build 10.1 on the RPG, contains the specific load instructions for an RPG. Collocated RPG/RDA sites will require two personnel to load Build 10.1, one at the RPG/RDA site and one at the UCP. Make an extra copy of this attachment before starting.
- d. [ATTACHMENT 3](#), Procedures for Loading Build 10.1 on the RDA, contains the specific load instructions for the RDA.
- e. Using the instructions in [ATTACHMENT 2](#) and [ATTACHMENT 3](#), you will:
 - Backup the existing Build 10.0 RDA and/or RPG software
 - Load Build 10.1 tapes
 - Backup the new Build 10.1 software

2. Other Information

- a. For redundant RPG's and/or RDA's, accomplish the tasks in [ATTACHMENT 2](#) and [ATTACHMENT 3](#) twice as directed in the load instructions.
- b. If the system(s) does not become operational after loading Build 10.1, follow the instructions in the back of each attachment to call the OSF Hotline and then to reload the Build 10.0 files. The OSF Hotline will initiate action to resolve the problems.
- c. If it has been a while since the heads of the SCSI tape drives have been cleaned, use a SCSI tape cleaner in the drives before installing the new software.

3. Verify Tapes Delivered in Kit

- a. Locate the Build 10.1 configuration matrix included in the System Kit (RDA and RPG). Note that some of the tapes listed on this configuration matrix are not shaded. The non-shaded areas on the configuration matrix are the new tapes that contain the software changes for updating the software to Build 10.1.

ATTACHMENT 1 (Continued)

ORGANIZING YOUR BUILD 10.1 TAPES (Continued)

- b. Verify that the data on each tape label enclosed in the kit matches the tape data description in the configuration matrix. If a discrepancy is found, contact the OSF Configuration Management Section at (405) 366-6540, extension 3236 or call the OSF Hotline at 1-800-643-3363 or (405) 366-2980.

4. Protecting the Build 10.1 Tapes

- a. Ensure the write-protect arrows on all of the CM tapes listed in the configuration matrix are set to SAFE.
- b. Leave the write-protect arrows to OFF (away from SAFE) on all the new blank tapes. The load instructions will instruct when to set the write-protect arrows to SAFE.

5. Obtain Blank Tapes or Used Tapes

- a. For each FAA redundant site, eight blank tapes (four tapes for the RDA (two for each channel) and four tapes for the RPG (two for each channel)) will be required.
- b. New SCSI tapes should be used for making backups of the software loads. However, if new tapes are not available, use previous Operating System tapes or Applications tapes from Build 9.0 or earlier versions. Blank labels are included if these SCSI tapes are used.
- c. Each site will keep the Build 10.0 tapes, a backup copy of Build 10.0 tapes, the Build 10.1 tapes, and the backup copy of Build 10.1.

ATTACHMENT 2

PROCEDURES FOR LOADING BUILD 10.1 ON THE RPG

1. The RPG must be operating at the start of these procedures.
2. Have four blank (or used) SCSI tapes ready for a redundant system. For each channel two tapes will be for backing up files of each RPG for local retention. Start the load procedures with RPG #1, commonly called Channel #1.
3. Two persons will be required to perform these procedures: one at the UCP site, and the second at the RDA site. The person at the UCP site can be an operations person. Use EHB 6-520 (AF TO 31P1-4-108-42, and FAA 6460.1 V11) Maintenance Instructions Radar Product Generation (RPG) paragraph 4-4.8.1 UCP to Maintenance Terminal Switching Procedure to switch the RPG system console to the RDA maintenance terminal.
4. Begin the following specific load procedures.

ATTACHMENT 2 (Continued)

PROCEDURES FOR LOADING BUILD 10.1 ON THE RPG

<u>Step</u>	<u>Action/Procedure</u>	<u>Comments</u>
1. (UCP)	At the <code>COMMAND:</code> line, enter: RD,STAN<Return>	Places the radar in standby.
2. (UCP)	Press Function Key F1 , then at the <code>COMMAND:</code> line, enter: U,SH,O<Return> Shut down BOTH RPG's before continuing, then go back to RPG 1 for the first time through these procedures.	Terminates the application software. For redundant RPG's, ensure the other RPG is shut down to preclude crosstalk between two different Builds.
3. (UCP)	Press the <Shift><Port> keys simultaneously for RPG System Console. Wait for the message: <code>RPGMON: END OF TASK Ø</code> .	System console is displayed. (If collocated RPG/RDA, place the RDA maintenance terminal in the RPG system console mode.)
4. (RPG SYS)	At the * prompt, enter: D TA<Return> If all tasks are canceled, a <code>TASK(S) NOT FOUND</code> message appears and proceed to step 7. If there are tasks in memory, proceed to step 5.	
5. (RPG SYS)	At the * prompt, enter: RPGABORT<Return> Wait for the message: <code>THERE NOW, DON'T WE FEEL BETTER.</code>	Terminates application tasks.
6. (RPG SYS)	At the * prompt, enter: D TA<Return> Wait for the message: <code>TASK(S) NOT FOUND</code> . If this does not appear, at the * prompt, enter: CA Taskid<Return> where [Taskid] is the name of each task that is still open.	This verifies that all tasks have been terminated. If any are still open, the CA [Taskid] will close each task individually.
7. (RPG SYS)	At the * prompt, enter: ERR LOG,OFF<Return>	Error logger is stopped.

ATTACHMENT 2 (Continued)

PROCEDURES FOR LOADING BUILD 10.1 ON THE RPG

<u>Step</u>	<u>Action/Procedure</u>	<u>Comments</u>
8. (SCSI Drive)	Take a blank SCSI tape. Turn the write protect arrow to OFF (pointing away from SAFE). Insert blank SCSI tape in the SCSI tape drive and slide the lever (or turn the lever if older drive) to secure the tape.	Ensure tape is secured in SCSI tape drive.
9. (RPG SYS)	At the * prompt, enter: BACKFILE CON:<Return>	Loads backup utility into memory and starts the program. Allows the manual selection of files.
10. (RPG SYS)	At the BACKUP> prompt, enter: -.<Return> !EXCLUDE BASE-./Ø<Return> !EXCLUDE DSC1-./Ø<Return> !EXCLUDE UNPACK.CSS<Return> !EXCLUDE USERSEL.DAT<Return> ./<Return> Wait for the message: END OF TASK Ø.	Selects option to transfer data files from Account Ø excluding Base, DSC1 data, UNPACK.CSS, and USERSEL.DAT files. Backing up and verifying will take approximately 4Ø minutes.
11. (SCSI Drive)	When the transfer is complete, remove the SCSI tape from the SCSI tape drive. Label the tape with the following information: - Current Date - Site ID - RPG Build 1Ø.Ø Backup - Channel # Turn the write protect arrow to SAFE.	Tape will not be used during the rest of the load procedures, but needs to be available if Build 1Ø.Ø needs to be reloaded.
12. (SCSI Drive)	Insert the Build 1Ø.1 RPG Applications tape in the SCSI tape drive and slide the lever (or turn the lever if older drive) to secure the tape.	Ensure tape is secured in SCSI tape drive.
13. (RPG SYS)	At the * prompt, enter: UNPACK<Return> Wait for the message: TAPE UNPACK PROCESS COMPLETED.	Loading of the tape will take approximately 12 minutes.
14. (SCSI Drive)	Remove the Build 1Ø.1 RPG Applications tape from the tape drive.	Save the tape in a secure place.
15. (RPG SYS)	At the * prompt, enter: MA DSCØ:,OFF<Return>	Disk is marked off.

ATTACHMENT 2 (Continued)

PROCEDURES FOR LOADING BUILD 10.1 ON THE RPG

<u>Step</u>	<u>Action/Procedure</u>	<u>Comments</u>
16. (RPG SYS)	At the * prompt, enter: D D/D<Return>	DSCØ D9 ØØØØ OFF appears. Ensures DSCØ: is off. If not, repeat steps 15 and 16.
17. (RPG SYS)	At the * prompt, while depressing the <Ctrl> key, enter: VV<Return>	CDS> prompt appears. It may take more than one <Return> to get the CDS> prompt to appear.
18. (RPG SYS)	At the CDS> prompt, enter: PO OFF<Return> Wait 5 seconds before continuing.	Turns off DC power supplies. For redundant RPG's, ensure the other RPG is shut down to preclude crosstalk between two different Builds.
19. (RPG SYS)	At the CDS> prompt, enter: PO ON<Return> Wait for the message: RPGLOAD: END OF TASK Ø.	Turns on DC power supplies and starts RPG initial bootup. It will take approximately 2 minutes for the OS to reboot. The RPG will be in an operational state.
20. (RPG SYS)	Press the <Shift><Port> keys simultaneously. View the RPG MAIN MENU screen and check to see the cursor blinking on the COMMAND: line.	This checks that the RPG is operational.
21. (UCP)	Press Function Key F1 , then at the COMMAND: line, enter: U,SH,O<Return> Shut down BOTH RPG's before continuing, then go back to RPG 1 for the first time through these procedures.	Terminates the application software. For redundant RPG's, ensure the other RPG is shut down to preclude crosstalk between two different Builds.
22. (UCP)	Press the <Shift><Port> keys simultaneously for RPG System Console. Wait for the message: RPGMON: END OF TASK Ø.	System console is displayed. (If collocated RPG/RDA, place the RDA maintenance terminal in the RPG system console mode.)
23. (RPG SYS)	At the * prompt, enter: D TA<Return> If all tasks are canceled, a TASK(S) NOT FOUND message appears and proceed to step 26. If there are tasks in memory, proceed to step 24.	

ATTACHMENT 2 (Continued)

PROCEDURES FOR LOADING BUILD 10.1 ON THE RPG

<u>Step</u>	<u>Action/Procedure</u>	<u>Comments</u>
24. (RPG SYS)	At the * prompt, enter: RPGABORT<Return> Wait for the message: THERE NOW, DON'T WE FEEL BETTER.	Terminates application tasks.
25. (RPG SYS)	At the * prompt, enter: D TA<Return> Wait for the message: TASK(S) NOT FOUND. If this does not appear, at the * prompt, enter: CA Taskid<Return> where [Taskid] is the name of each task that is still open.	This verifies that all tasks have been terminated. If any are still open, the CA [Taskid] will close each task individually.
26. (SCSI Drive)	Take a blank SCSI tape. Turn write protect arrow to OFF (pointing away from SAFE). Insert blank SCSI tape in the SCSI tape drive and slide the lever (or turn the lever if older drive) to secure the tape.	Ensure tape is secured in SCSI tape drive. This tape will be used to create a backup tape of RPG Build 10.1.
27. (RPG SYS)	At the * prompt, enter: ERR LOG,OFF<Return>	This turns off the error log so it will not be copied onto the backup tape and create an error when the verify portion of the backup utility is performed.
28. (RPG SYS)	At the * prompt, enter: BACKFILE CON:<Return>	Loads backup utility into memory and starts the program. Allows the manual selection of files.
29. (RPG SYS)	At the BACKUP> prompt, enter: -.<Return> !EXCLUDE BASE-. /Ø<Return> !EXCLUDE DSC1-. /Ø<Return> !EXCLUDE UNPACK.CSS<Return> !EXCLUDE USERSEL.DAT<Return> ./<Return> Wait for the message: END OF TASK Ø.	Selects option to transfer data files excluding BASE data, DSC1 data, UNPACK.CSS and USERSEL.DAT files. Backing up and verifying will take approximately 40 minutes.

ATTACHMENT 2 (Continued)

PROCEDURES FOR LOADING BUILD 10.1 ON THE RPG

<u>Step</u>	<u>Action/Procedure</u>	<u>Comments</u>
30. (SCSI Drive)	Once the transfer is complete, remove the SCSI tape from the SCSI tape drive. Label the tape with the following information: - Current Date - Site ID - RPG Build 10.1 Backup - Channel # Turn the write protect arrow to SAFE.	Store all the tapes in a safe, but accessible location. The tapes should be accessible in case the software needs to be reloaded.
31. (RPG SYS)	At the * prompt, enter: RPGUP<Return>	Starts up the RPG software.
NOTES		
Redundant sites (two RPGs) need to repeat steps 1 through 31 for the second RPG, Channel 2.		
The RPG(s) should now be in normal operation with Build 10.1. The RDA is still in standby from step 1. To bring the RDA back to operation, perform the following steps:		
32. (RPG SYS)	Press the <Shift><Port> keys simultaneously.	Applications terminal is displayed. When the RPG is again operational the RPG MAIN MENU is displayed.
33. (UCP)	At the COMMAND: line, enter: RD,OP<Return>	The RDA should now be operational.

STOP HERE IF THE RPG IS OPERATIONAL

The RPG is operational if, on the System Console, the system message reads: **RPGLOAD: END OF TASK 0**, followed by a **S309M1** message. At the UCP, there will be the RPG MAIN MENU with the cursor blinking on the **COMMAND:** line.

NOTE

If the Build 10.1 software load fails and Build 10.0 software needs to be reloaded, call the OSF Hotline and continue with the following instructions.

ATTACHMENT 2 (Continued)

PROCEDURES FOR LOADING BUILD 10.1 ON THE RPG

<u>Step</u>	<u>Action/Procedure</u>	<u>Comments</u>
34. (UCP)	If there is a UCP Main Menu, at the COMMAND: line, enter: U,SH,O<Return> If there is not a UCP Main Menu, skip to step 37.	Terminates application software.
35. (UCP)	Press <Shift><Port> keys simultaneously. Do not continue until RPGMON: END OF TASK message appears.	System console is displayed.
36. (RPG SYS)	At the * prompt, enter: D TA<Return> If all tasks are canceled, a TASK NOT FOUND message appears. Proceed to step 38. If there are tasks in memory, proceed to step 37.	
37. (RPG SYS)	At the * prompt, enter: RPGABORT<Return> Wait for the message: THERE NOW, DON'T WE FEEL BETTER.	Terminates applications tasks.
38. (RPG SYS)	At the * prompt, enter: ERR LOG,OFF<Return>	Error logger is stopped.
39. (SCSI Drive)	Insert the RPG Build 10.0 Backup SCSI tape from step 11 in the SCSI tape drive and slide the lever (or turn the lever if older drive) to secure the tape.	Ensure tape is secured in SCSI tape drive.
40. (RPG SYS)	To reload the Build 10.0 software, enter: UNPACK<Return> Wait for the message END OF TASK 0.	This unloads the Build 10.0 Software onto disk 0. Reloading will take approximately 30 minutes.
41. (SCSI Drive)	Once the transfer is complete, remove the SCSI tape from the SCSI tape drive. File it in a safe yet accessible place.	This saves the backup tape of Build 10.0 software.
42. (RPG SYS)	At the * prompt, enter: RPGUP<Return>	Starts up the RPG software. The RPG should now be back to normal operation with Build 10.0.
43.	Call the OSF Hotline and notify them that Build 10.1 was not able to be successfully loaded.	This will initiate action within the OSF to research the problem and to further assist in eventually loading Build 10.1.

ATTACHMENT 3

PROCEDURES FOR LOADING BUILD 10.1 ON THE RDA

1. The RDA must be operating at the start of these procedures.
2. The first series of steps will be done at the UCP. The majority of the steps are at the RDA shelter until the system is functional and all backup tapes have been made.
3. Have four blank (or used) SCSI tapes ready. For each channel, two tapes will be for backing up files for local retention.
4. Begin the following specific load procedures.

ATTACHMENT 3 (Continued)

PROCEDURES FOR LOADING BUILD 10.1 ON THE RDA

<u>Step</u>	<u>Action/Procedure</u>	<u>Comments</u>
1. (UCP)	Press Function Key F1 , then at the COMMAND: line, enter: AR,B,S<Return> Wait for the current volume scan to finish before continuing.	Cancels Archive II data collection if active.
2. (UCP)	Press Function Key F1 , then at the COMMAND: line, enter: RD<Return>	The RDA Control Menu appears on the screen.
3. (UCP)	At the COMMAND: line, after RD , enter: STAN<Return> Place BOTH RDA's in standby at this time, then return to Channel 1 RDA the first time through these instructions. Make the channel you are loading Build 10.1 on the controlling channel.	Places the radar in standby. For redundant systems, this prevents crosstalk between the two RDA's with different Builds.
4. (UCP)	At the COMMAND: line, after RD , enter: OF<Return> Then wait 5 minutes.	Places the radar in Offline operate. The radar begins its 8 hour calibration sequence every 2.5 minutes.
5. (UCP)	At the COMMAND: line, after RD , enter: STAN<Return>	Places the radar back into standby.
6. (UCP)	At the COMMAND: line, after RD , enter: OP<Return>	Places the radar into operation.
7. (UCP)	Press Function Key F1 , then at the COMMAND: line, enter: ST,S<Return> Log any alarms that were listed while the radar was in offline operate.	This displays the System Status Log.
8. (UCP)	Press Function Key F1 , then at the COMMAND: line, enter: RD,EN<Return>	This enables control at the RDA.

NOTE

The following steps require action at the RDA maintenance terminal, Applications screen.

ATTACHMENT 3 (Continued)

PROCEDURES FOR LOADING BUILD 10.1 ON THE RDA

<u>Step</u>	<u>Action/Procedure</u>	<u>Comments</u>
9. (RDA Term)	If Main Menu is displayed, proceed to step 10. If Main Menu is not displayed, enter on the Command line: MAIN<Return>	Main Menu appears on the display.
10. (RDA Term)	On the Command line, enter: RELC<Return>	This accepts control from the UCP.
11. (RDA Term)	On the Command line, enter: STBY<Return>	This places the RDA into standby.
12. (RDA Term)	On the Command line, enter: TERP<Tab>Password<Return>	Terminates application software.
13. (ARCH II Tape Rack)	Remove the 8mm Archive II tapes that had data written by Build 10.0. Refill the rack with new tapes and reload into the drive.	Removes all Build 10.0 Archive II tapes, and reloads the drive for use with Build 10.1.
14. (RDA Term)	Press the <Shift><Port> keys simultaneously. Wait for the message: TASK02: END OF TASK 255.	System console is displayed.
15. (SCSI Drive)	Take a blank SCSI tape. Turn the write protect arrow to OFF (pointing away from SAFE). Insert blank SCSI tape in the SCSI tape drive and slide the lever (or turn the lever if older drive) to secure the tape.	Ensure tape is secured in SCSI tape drive.
16. (RDA SYS)	At the * prompt, enter: D TA<Return>	The only task that should be displayed is TIME; all other tasks are canceled. If so, proceed to step 18. If other tasks are not canceled, note the [taskids] and proceed to step 17.
17. (RDA SYS)	At the * prompt, enter: CA Taskid<Return> Where [taskid] is the name of each task that is still open.	Cancels task. Repeat this step for all tasks that need canceling.
18. (RDA SYS)	At the * prompt, enter: LO BACKUP,5000<Return> Wait for the message: TSKID=BACKUP. Then enter: ST<Return>	Loads backup utility into memory and starts the program.

ATTACHMENT 3 (Continued)

PROCEDURES FOR LOADING BUILD 10.1 ON THE RDA

<u>Step</u>	<u>Action/Procedure</u>	<u>Comments</u>
19. (RDA SYS)	At the <code>BACKUP></code> prompt, enter: IN=DSCØ:<Return> OUT=STØ:<Return> SEL=CON:<Return> LIST=CON:<Return> SIZ=25Ø<Return> VER<Return> END<Return>	The <code>BACKUP></code> prompt will reappear after each operator input. After the <code>END<Return></code> command, wait for the <code>BACKUP></code> prompt to reappear.
20. (RDA SYS)	At the <code>BACKUP></code> prompt, enter: -.<Return> !EXCLUDE UNPACK.CSS<Return> ./<Return> Wait for the message <code>END OF TASK Ø</code> .	Backup process begins. This could take up to 3Ø minutes.
21. (SCSI Drive)	When the transfer is complete, remove the SCSI tape from the SCSI tape drive. Label the tape with the following information: - Current Date - Site ID - RDA Build 1Ø.Ø Backup - Channel # Turn write protect arrow to <code>SAFE</code> .	Tape will not be used during the rest of the load procedures, but needs to be available in case Build 1Ø.Ø needs to be reloaded.
22. (SCSI Drive)	Insert the Build 1Ø.1 RDA Applications Software tape in the SCSI tape drive and slide the lever (or turn the lever if older drive) to secure it.	Ensure tape is secured in SCSI tape drive.
23. (RDA SYS)	At the <code>* prompt</code> , enter: UNPACK<Return> Wait for the message: <code>TAPE UNPACK PROCESS COMPLETED</code> .	Loading of the tape will take approximately 1Ø minutes.
24. (SCSI Drive)	Remove the Build 1Ø.1 RDA Applications Software tape from the tape drive.	Save the tape in a secure place.
25. (RDA SYS)	At the <code>* prompt</code> , enter: MA DSCØ:,OFF<Return>	Disk is marked off.
26. (RDA SYS)	At the <code>* prompt</code> , enter: D D/D<Return>	<code>DSCØ D9 ØØØØ OFF</code> appears. Ensures <code>DSCØ:</code> is off. If not repeat steps 25 and 26.

ATTACHMENT 3 (Continued)

PROCEDURES FOR LOADING BUILD 10.1 ON THE RDA

<u>Step</u>	<u>Action/Procedure</u>	<u>Comments</u>
27. (RDA SYS)	At the * prompt, while depressing the <Ctrl> key, enter: VV<Return>	CDS> prompt appears. It may take more than one <Return> to get the CDS> prompt to appear.
28. (RDA SYS)	At the CDS> prompt, enter: PO OFF<Return> Wait 5 seconds before continuing.	Turns off DC power supplies.
29. (RDA SYS)	At the CDS> prompt, enter: PO ON<Return>	Turns on DC power supplies and starts RDA initial bootup. It will take approximately 2 minutes for the OS to reboot. The RDA will be in standby condition.
30. (RDA SYS)	Once the RDA logo/banner is displayed, press the <Shift><Port> keys simultaneously. Wait for the screen to refresh.	Application mode is displayed. Any alarms shown at this point should be disregarded. Banner should read NO ALARMS - BUILD 10.1.
31. (RDA Term)	For FAA sites with RMS installed, on the Command line, enter: RELC<Return> otherwise skip to step 32.	Transfers control.
32. (RDA Term)	On the Command line, enter: TERP<Tab>Password<Return>	Terminates application software.
33. (RDA Term)	Press the <Shift><Port> keys simultaneously. Wait for the message: TASK02: END OF TASK 255.	System console is displayed.
34. (RDA SYS)	At the * prompt, while depressing the <Ctrl> key, enter: VV<Return>	CDS> prompt appears. It may take more than one <Return> to get the CDS> prompt to appear.
35. (RDA SYS)	At the CDS> prompt, enter KEY 1,password<Return>	Must set CDS time to UTC time to synchronize the RDA Processor Time of Day Clock to UTC. One accurate source of time is the Naval Observatory at (202)762-1401.

ATTACHMENT 3 (Continued)

PROCEDURES FOR LOADING BUILD 10.1 ON THE RDA

<u>Step</u>	<u>Action/Procedure</u>	<u>Comments</u>
36. (RDA SYS)	At the CDS> prompt, enter: TI U,DAY,MM/DD/YY,hh:mm,P	DAY = First three letters (e.g. TUE) MM = 2 digit month (e.g. 01 - 12) DD = 2 digit day (e.g. 01 - 31) YY = 2 digit year (e.g. 99) hh = UTC hour (e.g. 00 - 23) mm = 2 digit minute (e.g. 00 - 59)
37. (RPG SYS)	At the tone from the time source corresponding to the time entered in step 36, press <Return>	Sets the time entered.
38. (RPG SYS)	At the CDS> prompt, enter: TI<Return>	Verify that the CDS clock time is correct. If the date and time are incorrect return to step 36.
39. (RPG SYS)	At the CDS> prompt, enter: CO<Return>	System console mode screen is displayed. You may have to press the <Return> key several time. Verify that the * prompt is displayed.
40. (RDA SYS)	At the * prompt, enter: CA TIME<Return>	Stops time of day program.
41. (RDA SYS)	At the * prompt, enter: BGLSETU<Return>	Loads set time program.
42. (RDA SYS)	At the SETIME> prompt, enter: MM/DD/YY,hh:mm:ss Wait until the next step to hit the <Return> key.	Enter the ZULU time to the next minute and seconds as 00. It is desirable to set the time within 1 second, although a 10 second error is tolerable.
43. (RDA SYS)	At the tone from the time source corresponding to the time entered in step 42 press: <Return>	SETIME: END OF TASK 0 message appears.
44. (RDA SYS)	At the * prompt, enter: BGLSTART<Return>	Starts time of day program.
45. (RDA SYS)	At the * prompt, enter: MA DSC0:,OFF<Return>	Disk is marked off.
46. (RDA SYS)	At the * prompt, enter: D D/D<Return>	DSC0 D9 0000 OFF appears. Ensures DSC0: is off. If not, repeat steps 45 and 46.

ATTACHMENT 3 (Continued)

PROCEDURES FOR LOADING BUILD 10.1 ON THE RDA

<u>Step</u>	<u>Action/Procedure</u>	<u>Comments</u>
47. (RDA SYS)	At the * prompt, while depressing the <Ctrl> key, enter: VV<Return>	CDS> prompt appears. It may take more than one <Return> to get the CDS> prompt to appear.
48. (RDA SYS)	At the CDS> prompt, enter: PO OFF<Return> Wait 5 seconds before continuing.	Turns off DC power supplies.
49. (RDA SYS)	At the CDS> prompt, enter: PO ON<Return>	Turns on DC power supplies and starts RDA initial bootup. It will take approximately 2 minutes for the OS to reboot. The RDA will be in standby condition.
50. (RDA SYS)	Once the RDA logo/banner is displayed, press the <Shift><Port> keys simultaneously. Wait for the screen to refresh.	Application mode is displayed. Any alarms shown at this point should be disregarded. Banner should read NO ALARMS - BUILD 10.1.
51. (RDA Term)	For FAA sites with RMS installed, on the Command line, enter: RELC<Return> otherwise skip to step 52.	Transfers control.
52. (RDA Term)	On the Command line, enter: OPER<Return> Let system run through 3 or 4 volume scans.	Puts system in operate.
53. (RDA Term)	On the Command line, enter: STBY<Return>	Places the radar into standby.
54. (RDA Term)	If RDA appears to be working, at the Command line, enter: TERP<Tab>Password<Return>	Terminates application software.
55. (RDA Term)	Press the <Shift><Port> keys simultaneously. Wait for the message: TASK 02: END OF TASK 255.	System console is displayed.
56. (SCSI Drive)	Take a blank SCSI tape. Turn the write protect arrow to OFF (pointing away from SAFE). Insert blank SCSI tape in the SCSI tape drive and slide the lever (or turn the lever if older drive) to secure the tape.	Ensure tape is secured in SCSI tape drive. This tape will become the backup tape of RDA Build 10.1.

ATTACHMENT 3 (Continued)

PROCEDURES FOR LOADING BUILD 10.1 ON THE RDA

<u>Step</u>	<u>Action/Procedure</u>	<u>Comments</u>
57. (RDA SYS)	At the * prompt, enter: D TA<Return>	The only task that should be displayed is TIME; all other tasks are canceled. If so, proceed to step 59. If other tasks are not canceled, note the taskid's and proceed to step 58.
58. (RDA SYS)	At the * prompt, enter: CA Taskid<Return>	Cancels task. Repeat this step for all tasks that need canceling.
59. (RDA SYS)	At the * prompt, enter: BACKFILE CON:<Return>	Loads the backup utility into memory and starts the program. Allows the manual selection of files.
60. (RDA SYS)	At the BACKUP> prompt, enter: .-<Return> !EXCLUDE UNPACK.CSS<Return> ./<Return> Wait for the message: END OF TASK Ø.	Backup process begins. This could take up to 3Ø minutes.
61. (SCSI Drive)	When the transfer is complete, remove the SCSI tape from the SCSI tape drive. Label the tape with the following information: - Current Date - Site ID - RDA Build 1Ø.1 Backup - Channel # Turn write protect arrow to SAFE.	Store all the tapes in a safe, but accessible location. The tapes should be accessible in case the software needs to be reloaded.
62. (RDA SYS)	At the * prompt, enter: RDAUP<Return>	Starts up the RDA software.
63. (RDA SYS)	Once the RDA logo/banner is displayed, press the <Shift><Port> keys simultaneously. Wait for the screen to refresh.	Application software is displayed.
64. (RDA Term)	For FAA sites with RMS installed, on the Command line, enter: RELC<Return> otherwise skip to the note below.	Transfers control.

ATTACHMENT 3 (Continued)

PROCEDURES FOR LOADING BUILD 10.1 ON THE RDA

<u>Step</u>	<u>Action/Procedure</u>	<u>Comments</u>
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NOTES

Repeat steps 1 through 64 for the second RDA, Channel 2.

The RDA(s) should now be in normal operation with Build 10.1

65. (RDA Term)	When the STAT goes to <i>STBY</i> , enter on the Command line: OPER<Return>	This turns the RDA into operate mode, and the antenna should start rotating.
66. (RDA Term)	On the Command line, enter: ARCH<Return>	Restarts Archive II.
67. (RDA Term)	On the Command line, enter: ENRC<Return>	Control of the radar is sent back to the UCP terminal.
68. (UCP)	Press Function Key F1 , then at the <i>COMMAND</i> : line, enter: RD<Return>	This displays the RDA Control Menu on the screen.
69. (UCP)	Press Function Key F1 , then at the <i>COMMAND</i> : line, enter: ST,S<Return> Look at the alarms, if any, on the system status log. If there is a printer with the UCP, press Function Key F1 , then enter: ST,PRI<Return> If there is not a printer, scroll through the pages of the System Status log and write down all alarms.	This identifies all the alarms that are on the Build 10.1 System. If there are any new alarms, call the OSF Hotline.

STOP HERE IF RDA IS OPERATIONAL

The RDA is operational if, on the System Screen (Port A), there is the RDA Logo and Tower. On the Applications Monitor (Port B), the four lines of SYSTEM STATUS will be on top, followed by the two lines of the ALARM SCREEN, and then the CONTROL LINES.

NOTE

However, if the Build 10.1 software load does not operate and Build 10.0 software needs to be reloaded, call the OSF Hotline, and continue with the following instructions.

ATTACHMENT 3 (Continued)

PROCEDURES FOR LOADING BUILD 10.1 ON THE RDA

<u>Step</u>	<u>Action/Procedure</u>	<u>Comments</u>
70. (SCSI Drive)	Insert the RDA Build 10.0 Backup tape from step 21 in the SCSI tape drive and slide the lever (or turn the lever if older drive) to secure the tape.	Ensure tape is secured in SCSI tape drive.
71. (RDA SYS)	At the * prompt, enter: UNPACK<Return> Wait for the message: END OF TASK 0.	This unloads the Build 10.0 software onto DSC0: Reloading may be approximately 30 minutes.
72. (SCSI Drive)	When the transfer is complete, remove the SCSI tape from the SCSI tape drive. File it in a safe, yet accessible place.	This saves your backup tape of Build 10.0 software.
73. (RDA SYS)	At the * prompt, enter: RDAUP<Return>	Starts up the RDA software. The RDA should now be back to normal operation with Build 10.0.
74.	Call the OSF Hotline and notify them that Build 10.1 was not able to be loaded successfully.	This will initiate action within the OSF to research the problem and to further assist in eventually loading Build 10.1.

ATTACHMENT 4

SOFTWARE BUILD 10.1 COMPLETION FORM

Site Name: _____

Site Identifier: _____

Total Time to complete this EEM: _____

Technician's Name(s): _____

Technician's Phone Number: _____

Date Installed: _____

Problem(s) Encountered: _____

Upon completion of form, fax or mail to:

System Support Branch, Configuration Management
WSR-88D Operational Support Facility
3200 Marshall Ave, Suite 101
Norman, OK 73072-8028

Fax number: (405) 366-6553